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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,462	08/12/2005	Henrik Holter	43327-212567	4516
26694	7590	09/24/2007		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER WIMER, MICHAEL C	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 09/24/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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## Office Action Summary

Application No.

10/520,462

Applicant(s)

HOLTER, HENRIK

Examiner

Michael C. Wimer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-34, 36-42 and 44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-34, 36-42 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 22, 27 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Monser et al. (3795005).

Regarding Claim 22, Monser et al. show in Figure 1, an electrically controlled broadband group antenna comprising a plurality of antenna radiating elements arranged in a common plane (at least two, 15a and 15b, etc. are in a common plane), each antenna radiating element comprising a rotationally-symmetrical body (e.g. defined as the supports 39a-d in Figures 2 and 4 or the "solid" support 52(50) in Fig. 3, and described as conical) arranged on a ground plane that is common to several of the elements (see col. 3, lines 21-26), each body having a shape that tapers toward the axis of rotation with increasing distance from the ground plane, each radiating element being covered with a metallic casing surface 41, 41' (Fig. 3), and a feeder unit (e.g., 21r in Fig. 1) operatively connected to the antenna radiating elements, all arranged as claimed.

Regarding Claim 27, the base 37, 37' defines a spacing sleeve positioned as claimed.

### ***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monser et al. (3795005) in view of Marino (6043785).

Regarding Claims 23 and 24, Monser et al. lack a specific teaching of isolating adjacent antenna elements. A skilled artisan knows and finds it obvious that the technique of slots between radiators taught by Marino, is employed for radiator isolation by being electrically, an open circuit. Marino shows slots 17 or recesses between the radiators and formed within the ground plane 15. Therefore, it would have been obvious to the skilled artisan to employ such recesses/slots in the ground plane of Monser et al. for the purpose of radiator isolation (see column 4 second paragraph of Marino).

5. Claims 25, 26 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monser et al. (3795005) in view of Ohtsuka et al. (5801660).

Regarding Claims 25 and 26, screws are widely employed in the antenna art for securing antennas to a ground plane, as shown by Ohtsuka et al. Monser et al. merely state that the antennas are disposed on the common ground plane, leaving it to the skilled artisan to provide a proper securing means. Thus, it would have been obvious to the skilled artisan to employ the screws, such as 26 securing the antenna radiators in Monser et al. with the screws 26.

6. Claim 28-34,36,39-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monser et al. (3795005).

Regarding Claims 28,32 and 44, Monser et al show two cables per element in Fig. 3 and at least one cable bush 45 when a single cable is used (Figures 2 and 4). A skilled artisan would have found it obvious to employ two cable bushes when two cable feeders and elements are used, such as in Fig. 3. As to Claim 29, coax is an obvious 50 ohm feeder for antenna elements and the choice to the skilled artisan who finds it obvious to employ in Monser et al. Regarding Claims 30 and 31, the arrangement of a rectangular and triangular pattern of antenna elements in Monser et al. is an obvious choice and a skilled artisan would certainly arrange such elements so long as grating lobes are minimized. See Figure 1 of Monser et al. where such geometrical arrangements may be seen. Regarding Claim 33, the spacing of the antennas is set forth in column 4, first paragraph of Monser et al. A half-wave length is conventional in multi-element arrays. A skilled artisan would have spaced the antennas with such a wave length spacing. Regarding Claim 34, the microwave units are shown in Fig. 1 where they are defined by the plate to which the elements are mounted and all electronics beneath it. Regarding Claim 36, the second end of the radiators is the end mounted to the ground plane in Monser et al.

#### ***Response to Arguments***

7. Applicant's arguments filed 6/25/2007 have been fully considered but they are not persuasive. Specifically, the antenna element is built with a rotationally symmetrical body (in this case dielectric supports) and the helical conductor wrapped around the

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body does define the radiator surface. The helix, no matter the pitch (i.e., how tight it is wrapped together around its former) does define the radiating surface and is a metallic casing about the supports (i.e., the former). Since all claimed structure has been shown and evidence of obviousness has been set forth, the rejections stand.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael C. Wimer  
Primary Examiner  
Art Unit 2821

MCW

9/12/2007